Section 1 - Product and Company Identification

Product Name: GC Columns
Date Prepared: 08/27/07
Manufacturer's Name: Agilent Technologies, Inc.
2850 Centerville Road
Wilmington, Delaware 19808
USA Emergency Telephone Number: 1-302-633-8899
USA Information Telephone Number: 1-877-4Agilent
European Information Telephone Number: (7243) 602-2
European Emergency Telephone Number: 0049(0)6151/722440
When Calling from Outside the USA You May Also Dial Your International Access Code for the USA, then 1, then 302 633 8777

Section 2 - Composition/Information on Ingredients

GC columns are made of stainless steel, aluminum or polyimide coated fused silica. Each column contains one of the following: silicon polymers, polyethylene glycol polymers, silicon and polyethylene glycol polymers, organic porous layer open tubing (PLOT) or inorganic porous layer open tubing (PLOT). These products have no CAS number assigned.

Chemical Families: silicon polymers, polyethylene glycol polymers
Chemical Synonyms: Polyethylene glycol is also known as PEG.

Section 3 - Hazards Identification

No adverse human health effects have been observed upon exposure to the polymers in these columns.

Section 4 - First-Aid Measures

Inhalation: If breathing is difficult, move affected person to fresh air. Skin Contact: If irritation occurs, wash with soap and water. Eye Contact: If irritation occurs, irrigate the eyes with copious amounts of water by separating the eyelids with fingers. Ingestion: If swallowed, get medical attention immediately.

Section 5 - Fire-Fighting Measures

Extinguishing Media: Appropriate to surroundings. Special Fire Fighting Procedures: Wear full protective clothing and self contained positive pressure breathing apparatus certified by NIOSH when fighting chemically related fires. Unusual Fire and Explosion Hazards: None

Section 6 - Accidental Release Measures

Wearing appropriate personal protective equipment, sweep up using a dust suppresser. Vacuum the remainder of the smaller quantities using a HEPA-type vacuum. Avoid inhaling dust. Place waste in a plastic bag or other suitable container and dispose of as residual waste. Unused material is not defined as hazardous waste by RCRA (40 CFR Part 261) and may be landfilled according to federal, state and local regulations.

Section 7 - Handling and Storage


DISCLAIMER: This Material Safety Data Sheet is offered without charge to the clients of Agilent Technologies. Data is the most current available to Agilent Technologies at the time of preparation and is issued as a matter of information only, no warranty as to its accuracy or completeness is expressed or implied.
Section 8 - Exposure Controls/Personal Protection

**Ventilation:** Adequate ventilation is required to protect personnel from exposure to chemical vapors or dusts exceeding PEL and to minimize fire hazards. See Section 15 for regulatory standards of exposure. **Respiratory:** Use NIOSH approved respirator equipment. See Section 15. **Eyes:** Safety glasses are considered minimum protection. Chemical safety goggles or face shield may be necessary depending on quantity of material and conditions of use. Emergency eye wash fountains should be available in the vicinity of any possible exposure. **Skin:** Chemical-resistant protective gloves and clothing are recommended. The choice of protective gloves or clothing must be based on chemical resistance and other user requirements. Generally BUNA-N offers acceptable chemical resistance. Individuals who are acutely and specifically sensitive to this chemical may require additional protective clothing.

Section 9 - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point (Method Used)</td>
<td>NA</td>
</tr>
<tr>
<td>Specific Gravity (H₂O = 1)</td>
<td>NA</td>
</tr>
<tr>
<td>Evaporation Rate (n-butyl acetate = 1)</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg at 25°C)</td>
<td>ND</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>ND</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Insoluble (X)</td>
</tr>
<tr>
<td>Appearance and Odor:</td>
<td>Columns, no odor.</td>
</tr>
<tr>
<td>Explosion Potential:</td>
<td>LEL (NA)/UEL (NA)</td>
</tr>
<tr>
<td>Melting Point (Degree F):</td>
<td>NA</td>
</tr>
<tr>
<td>Boiling Point (Degree F):</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density (Air =1):</td>
<td>NA</td>
</tr>
<tr>
<td>Octanol/Water Partition Coefficient:</td>
<td>NA</td>
</tr>
</tbody>
</table>

Section 10 - Stability and Reactivity

**Stability:** Stable (x) / Unstable ()  **Conditions to Avoid:** NA

**Incompatibility (Materials to Avoid):** NA

**Hazardous Decomposition or Byproducts:** NA

**Hazardous Polymerization:** May Occur () / Will Not Occur (x)

Section 11 - Toxicological Information

**Route(s) of Entry:** Inhalation? No  Skin? No  Eyes? No  Ingestion? No

**Health Hazard Acute/Chronic:** No adverse human health effects have been observed upon exposure to the polymers in these columns.

**Carcinogenicity:** NTP? No  IARC Monographs? No  OSHA Regulated? No  Others? No

**Medical Conditions Generally Aggravated by Exposure:** None known.

Section 12 - Ecological Information

**Persistence/Degradability:** ND

**Biodegradability:** ND

**Bioaccumulation:** NA

Section 13 - Disposal Considerations

Unused product is not hazardous as defined by RCRA (40 CFR Part 261). Unused material may be landfilled as a residual waste according to federal, state and local regulations.

Section 14 - Transport Information

**DOT Regulations:**

- Shipping Name: Non-regulated Material
- RID/ADR: NA

**IATA-DGR Regulations:**

- Shipping Name: Non-regulated Material
- ADNR: NA

Section 15 - Regulatory Information (fused silica)

**Exposure Limits:** There are no established exposure limits for the polymers.

**SARA Reporting:** Section 302: None  Section 304: None  Section 313: None

**OSHA Labeling Requirements:** None
Section 16 - Other Information

Unless otherwise noted, the above information pertains only for the base material and similar types of components in the sample.
When no toxicity data is provided, it is prudent to handle this chemical as hazardous.
Furthermore, since individual chemical hypersensitivity cannot be predicted, every chemical should be handled with due respect.

KEY TO ABBREVIATIONS

ACGIH - American Conference of Governmental Industrial Hygienists
ADNR - Regulations concerning the carriage of dangerous goods on the Rhine
CAS - Chemical Abstract Service
DOT - US. Department of Transportation 49 Code of Federal Regulations
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association - Dangerous Goods Regulation
LEL - Lower Explosion Limit
NA - Not Applicable
ND - No Data
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limit
RID/ADR - Regulations Concerning the International Carriage of Dangerous Goods by Rail/European Agreement Concerning the International Carriage of Dangerous Goods by Road
TLV - Threshold Limit Value
TWA - Time Weighted Average
UEL - Upper Explosion Limit
[ ] - Indicates CAS Number